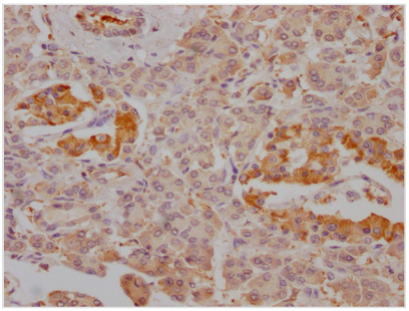
FBP1 Recombinant Monoclonal Antibody

Product Code	CSB-RA787345A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P09467
Immunogen	A synthesized peptide derived from human FBP1
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	Catalyzes the hydrolysis of fructose 1,6-bisphosphate to fructose 6-phosphate in the presence of divalent cations, acting as a rate-limiting enzyme in gluconeogenesis. Plays a role in regulating glucose sensing and insulin secretion of pancreatic beta-cells. Appears to modulate glycerol gluconeogenesis in liver. Important regulator of appetite and adiposity; increased expression of the protein in liver after nutrient excess increases circulating satiety hormones and reduces appetite-stimulating neuropeptides and thus seems to provide a feedback mechanism to limit weight gain.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling; Cancer; Metabolism; Signal transduction
Gene Names	FBP1
Clone No.	4G3
Image	 IHC image of CSB-RA787345A0HU diluted at 1:100 and staining in paraffin-embedded human pancreatic tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The production of the FBP1 recombinant monoclonal antibody is a multi-step process that involves several complex procedures. First, the FBP1 monoclonal antibody is extracted and its genetic code is identified through sequencing. Next, a vector containing the FBP1 monoclonal antibody gene is constructed and transfected into a host cell line for culturing. An immunogen used to generate the FBP1 monoclonal antibody is a human FBP1-derived peptide. The resulting FBP1 recombinant monoclonal antibody is then purified using affinity chromatography to ensure its high specificity and purity. Finally, the antibody is tested for its specificity in ELISA and IHC assays to confirm its ability to accurately detect FBP1. It only reacts with human FBP1 protein.

The FBP1 protein is an enzyme that plays a critical role in glucose metabolism, specifically in gluconeogenesis and the regulation of glycolysis. FBP1 catalyzes the hydrolysis of fructose-1,6-bisphosphate to fructose-6-phosphate and inorganic phosphate, which is a key step in the gluconeogenic pathway. FBP1 catalyzes the hydrolysis of fructose-1,6-bisphosphate to fructose-6-phosphate and inorganic phosphate, which is a key step in the gluconeogenic pathway. FBP1 has been shown to have tumor suppressor activity in various types of cancer, including liver, breast, and lung cancers. Loss of FBP1 expression has been associated with increased glucose uptake and glycolysis, which are hallmarks of cancer cells.